

**ABSTRACT OF THE DISCLOSURE****DISTORTION REDUCTION CALIBRATION**

Techniques are disclosed for compensating for second-order distortion in a wireless communication device. In a zero-intermediate frequency (IF) or low-IF architecture, IM2 distortion generated by the mixer (20) results in undesirable distortion levels in the baseband output signal. A compensation circuit (104) provides a measure of the IM2 distortion current independent of the radio frequency (RF) pathway to generate an IM2 calibration current. The IM2 calibration current is combined with the baseband output signal to thereby eliminate the IM2 currents generated within the RF pathway. In one embodiment, the calibration is provided at the factory during final testing. In alternative embodiment, additional circuitry (156, 158) may be added to the wireless communication device to provide a pathway between the transmitter (150) and the receiver (146). The transmitter signal is provided to the receiver to permit automatic calibration of the unit. An internal signal source (162) may be used in place of the transmitter (150). The auto-calibration may be performed to eliminate IM2 distortion or permit optimization of the circuit to minimize other forms of distortion or interference.